

Abstract

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5 A diode pumped solid state laser for producing a high aspect ratio beam comprises a diode
pumping array (1) on a diode array mount (3) and optical means for imaging a pump light
beam onto a substantially asymmetrical spot with a smooth intensity profile. The pump light
beam is pumping a laser medium (4). Both the pump and the lasing mode have strong
asymmetries. In combination with the right choice of laser medium (4), this results in high
power laser performance. The axis of the pump light beam is adjustable by a simple
adjusting means (110) to a defined plane or direction relative to a mounting frame (111) of a
diode array pumping device (103). The adjusting means (110) compensates small
tolerances on mounting of the diode array (1) and/or at least one optical element (2). The
adjusting means include at least one wedged window (127). Because of this adjustment the
axis of the light beam lies in a defined plane relative to the mounting frame (111) of the
pumping device (103). Therefore the diode array pumping device (103) of a laser is
replaceable without any further adjustment.

Fig. 13a